



# WELCOME

Traffic Noise

Public Information Meeting

Greensboro Western Urban Loop  
Battleground Avenue to Lawndale Drive





# Greensboro Western Urban Loop

Battleground Avenue to Lawndale Drive

## Traffic Noise Public Information Meeting

*February 29, 2016*

Greg Smith, LG, PE, NCDOT Traffic Noise & Air Quality Group Leader



# *Greensboro Western Urban Loop Traffic Noise Public Meeting*

## **Agenda**

- Why are we here?
- What is traffic noise?
- How does NCDOT address traffic noise?
- Where are the proposed noise walls located?
- What will the proposed noise walls look like?
- What's next?





# *Why are we here?*



# Why are we here?

- NCDOT will soon solicit Public Preference Ballots FOR or AGAINST seven proposed noise walls
- Tonight, NCDOT will provide balloting information to eligible voters and answer questions related to the balloting process



# *What are we voting on?*

“Yes” or “No” to construct the walls

☐ .....YES, I prefer the noise barrier construction

☐ ...NO, I do not prefer the noise barrier construction

Clearly mark your selection within the corresponding box.  
Your ballot must be postmarked by \_\_\_\_\_ for consideration.





# *What is traffic noise?*



# *Traffic Noise Definitions*

***Noise*** = unwanted or excessive sound

***Decibel*** = unit that defines sound energy

***Noise Receptor*** = any structure that receives any level of noise (not necessarily excessive)

***Impacted Receptor*** = receptor that receives elevated traffic noise levels above defined threshold levels due to highway traffic noise

***Benefited Receptor*** = receptor that receives a 5-decibel or more reduction in noise due to a noise wall





# Traffic Noise Levels

Common Outdoor and Indoor Noises			
Outdoor Noises	Sound Pressures (uPa)	Sound Pressure Levels (dB)	Indoor Noises
Jet Flyover at 300 m	6,324,555	110	Rock Band at 5 m
Gas Lawn Mower at 1 m	2,000,000	100	Inside Subway Train (New York)
Diesel Truck at 15	632,456	90	Food Blender at 1 m
Noisy Urban Daytime	200,000	80	Garbage Disposal at 1 m
Gas Lawn Mower at 30 m	63,246	70	Shouting at 1 m
Commercial Area	20,000	60	Vacuum Cleaner at 3 m
Quiet Urban Daytime	6,325	50	Normal Speech at 1 m
Quiet Urban Nighttime	2,000	40	Large Business Office
Quiet Suburban Nighttime	632	30	Dishwasher Next Room
Quiet Rural Nighttime	200	20	Small Theatre, Large Conference Room (Background)
	63	10	Library
	20	0	Bedroom at Night
			Concert Hall (Background)
			Broadcast and Recording Studio
			Threshold of Hearing

Deafening

Very Loud

Loud

Moderately Loud

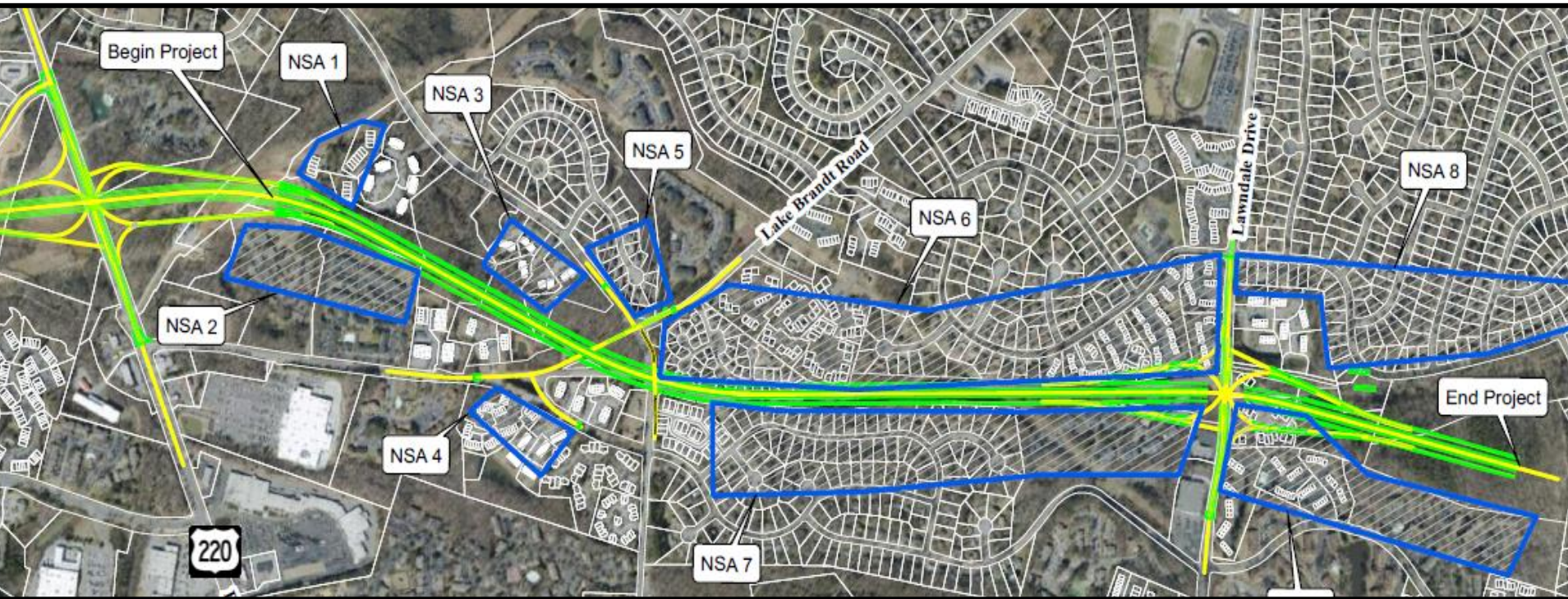
Faint

Very Faint

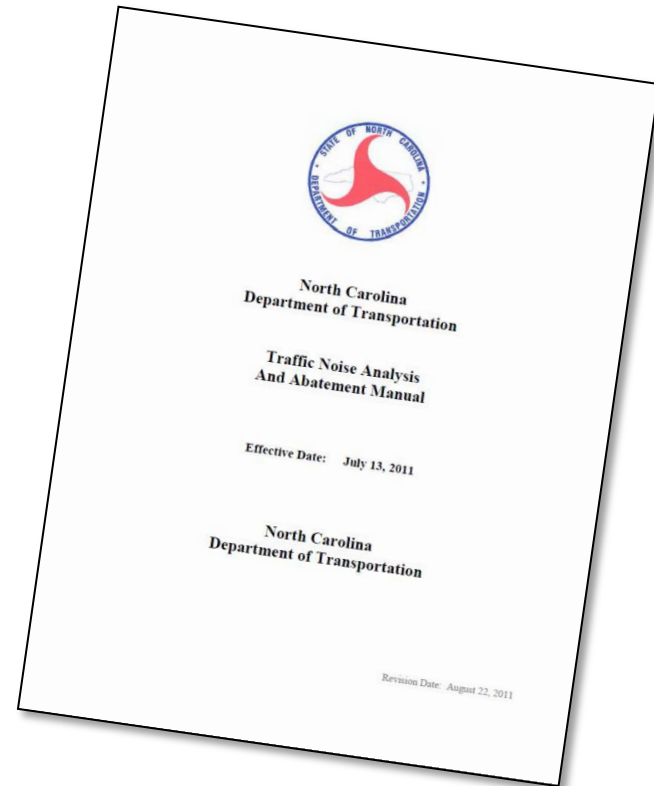
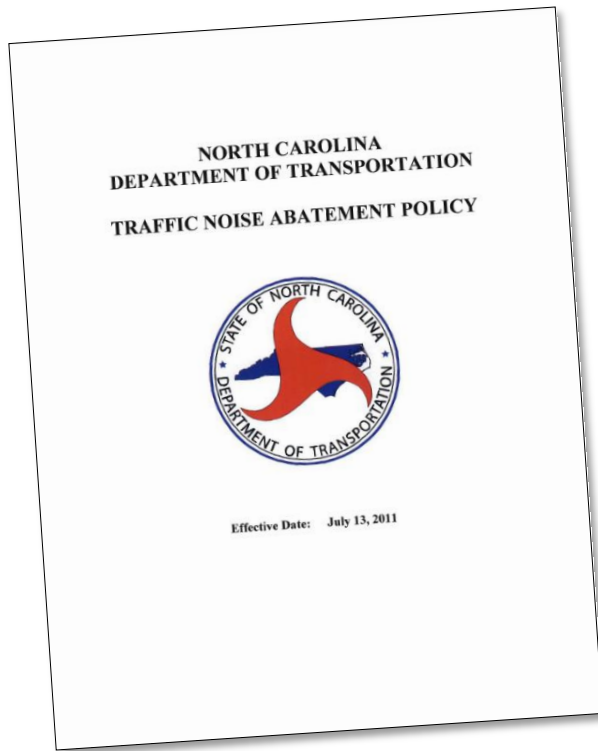
67 decibels = FHWA criteria for exterior residential noise



# *How does NCDOT address traffic noise impacts?*

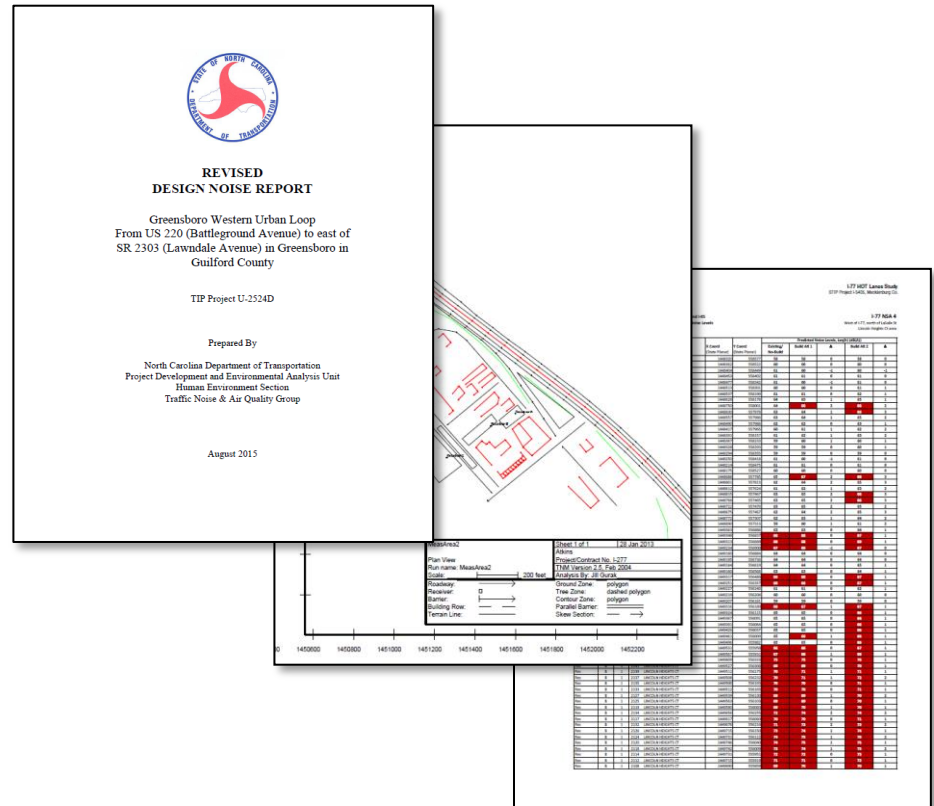


# *NCDOT Traffic Noise Abatement Policy and Manual*





# *Traffic Noise Study Completed in 2015*



# *NCDOT Traffic Noise Abatement Policy*

## **Date of Public Knowledge**

- Date of Final Design Public Hearing
- After this date, NCDOT *is not responsible* for noise abatement
- Local governments and private landowners are responsible



February 15, 1996



# *NCDOT Traffic Noise Abatement Policy*

## **Date of Public Knowledge**

- Trigger is approval date of building permit for individual lot or site, relative to the Date of Public Knowledge
- NOT approval date of development plans or plat





# *NCDOT Traffic Noise Abatement Policy*

## **Feasible**

- Acoustic and engineering factors
  - Does the noise reduction measure work?
  - Can it be built?

## **Reasonable**

- Social, economic, and environmental factors
  - Is it within the allowable quantity?
  - Does the public want it?
  - Does it meet design goals?



# *Public Preference Balloting*

## Who Gets To Vote?

As part of determining if the walls are reasonable, NCDOT mails ballots to all benefited property owners and tenants.



# *Public Preference Balloting*

## **Weighted Ballots**

- **4 points/ballot** for front row property owners who reside at property
- **3 points/ballot** for adjacent property owners who rent property
- **2 points/ballot** for all other property owners who reside at property
- **1 point/ballot** for all other property owners who rent property
- **1 point/ballot** vote for all tenants

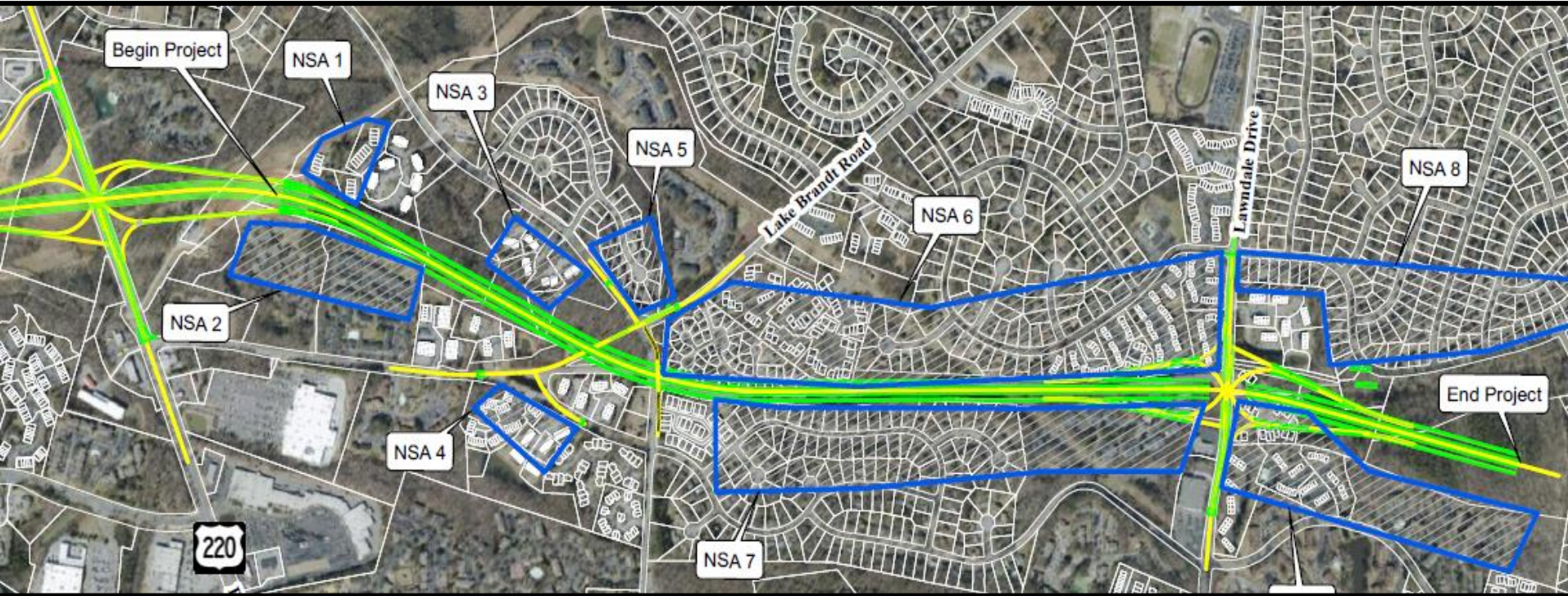




# *Traffic Noise Demonstration*

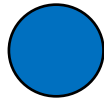


# *Where are the proposed noise walls?*

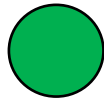


# *Proposed Noise Reduction Measures*

## Receptor Types on Aerial Mapping



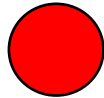
Impacted and Benefited



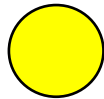
Not Impacted and Benefited



**Solicited  
Receptors**



Impacted and Not Benefited



Not Impacted and Not Benefited



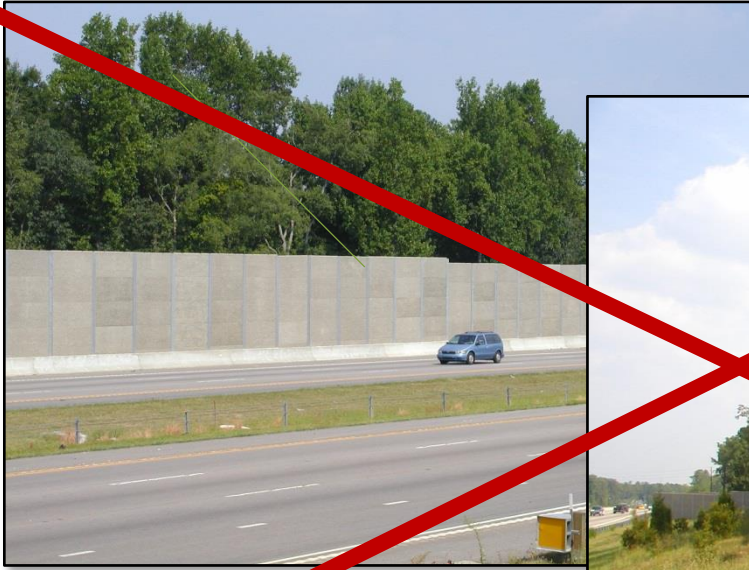
Right of Way Acquisition



# *What do the proposed noise walls look like?*



# *Proposed Noise Walls*



# *Proposed Noise Walls*

- Precast Concrete Panels with Ashlar Stone Texture On Both Sides
- Topmost Foot of Panels Has No Texture
- Concrete Columns
- Medium Gray Stain on Panels Only





# *Proposed Noise Walls*



Highway Side



Community Side






*What's next?*



# Noise Ballots To Be Mailed by Mid-March 2016

  
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCORMY  
Governor

March \_\_, 2016

NICHOLAS J. TENNYSON  
Secretary

**Property Owner Preference Survey**  
Greensboro Western Urban Loop / Battleground Ave. to Lawndale Drive  
State Project U-2524D

Dear Property Owner or Tenant:

The North Carolina Department of Transportation (NCDOT) conducted traffic noise analyses during planning and design for the proposed Greensboro Western Urban Loop (I-840) project to determine if allowable noise reduction measures meet feasibility and reasonableness guidelines found in the NCDOT Traffic Noise Abatement Policy. The results of our analyses indicate that construction of a noise wall between your property and the proposed highway project is justified.


You are receiving this letter because your property or residence is predicted to receive a reduction in future traffic noise if the proposed wall is built. The NCDOT Policy requires that owners and tenants of residences that will receive at least a 5-decibel reduction in predicted traffic noise due to noise wall construction will have input into whether or not the noise wall is constructed. A residence is termed "benefited" if it is predicted to receive this 5-decibel reduction. NCDOT is asking for your vote to help determine the public's preference for or against the proposed noise wall.

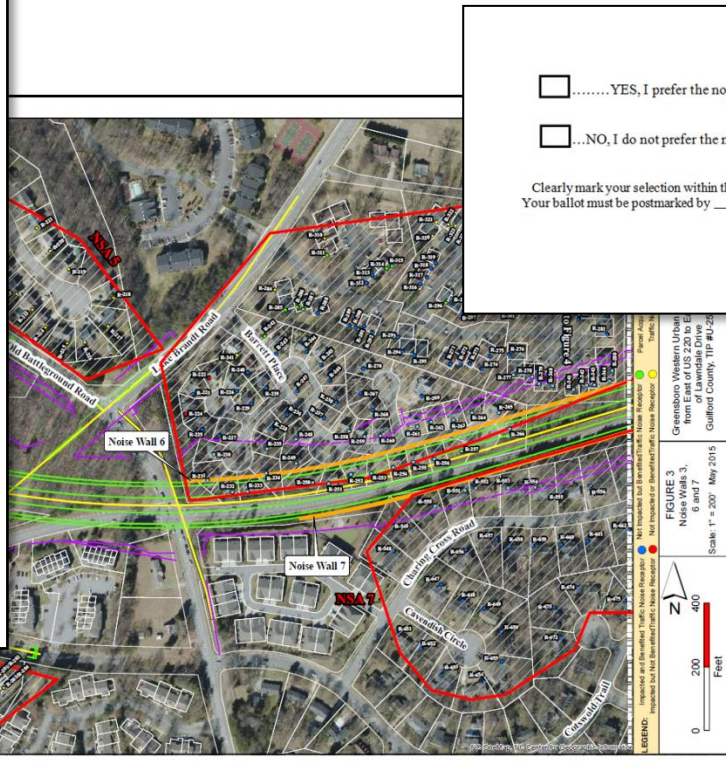
A ballot with your voting options is enclosed for you to complete and return postage free to NCDOT. Points per ballot are distributed in the following weighted manner:

- 3 points per ballot for benefited front row property owners (4 points if owner-occupied)  
Front row property owners are located directly behind the noise wall
- 1 point per ballot for all other benefited property owners (2 points if owner-occupied)  
Benefited property owners are not located directly behind the noise wall
- 1 point per ballot for all residents of benefited rental properties

The proposed noise wall will be built unless more than 50% of the total points distributed indicate that eligible voters do not want the wall. There is no charge to property owners or tenants for construction of the proposed wall. **Your ballot must be postmarked on or before March \_\_, 2016 to be counted.**

If you need additional information, please contact me by telephone at (919) 707-4087, by mail at NCDOT, Human Environment Section, 1598 Mail Service Centre, Raleigh, NC 27699-1598, or by e-mail at [psmith@ncdot.gov](mailto:psmith@ncdot.gov).

Sincerely,  
  
Gregory A. Smith, PE  
Traffic Noise & Air Quality Supervisor  
Human Environment Section



☐ ..... YES, I prefer the noise barrier construction

☐ ...NO, I do not prefer the noise barrier construction

Clearly mark your selection within the corresponding box.  
Your ballot must be postmarked by \_\_\_\_\_ for consideration.

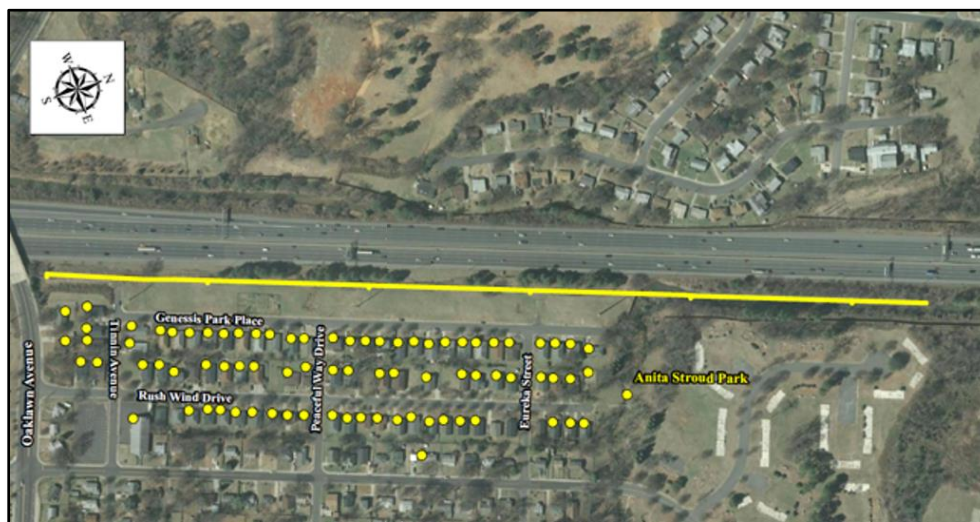
# *Ballots Must Be Postmarked By Date Indicated in the Letter To Be Considered*



# *What Determines the Outcome*

## How is your vote Counted?

NCDOT will build the proposed noise walls unless a simple majority of all distributed points are returned that indicates the balloted voters do not want the walls





# *Questions?*



## *Information Contacts*

### **Greg Smith, LG, PE**

NCDOT Traffic Noise & Air Quality

Supervisor

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### **Patty Eason, PE**

NCDOT Division 7

Construction Engineer

PO Box 14996

Greensboro, NC 27415-4996

336-487-0000

[peason@ncdot.gov](mailto:peason@ncdot.gov)



*Thank You*

